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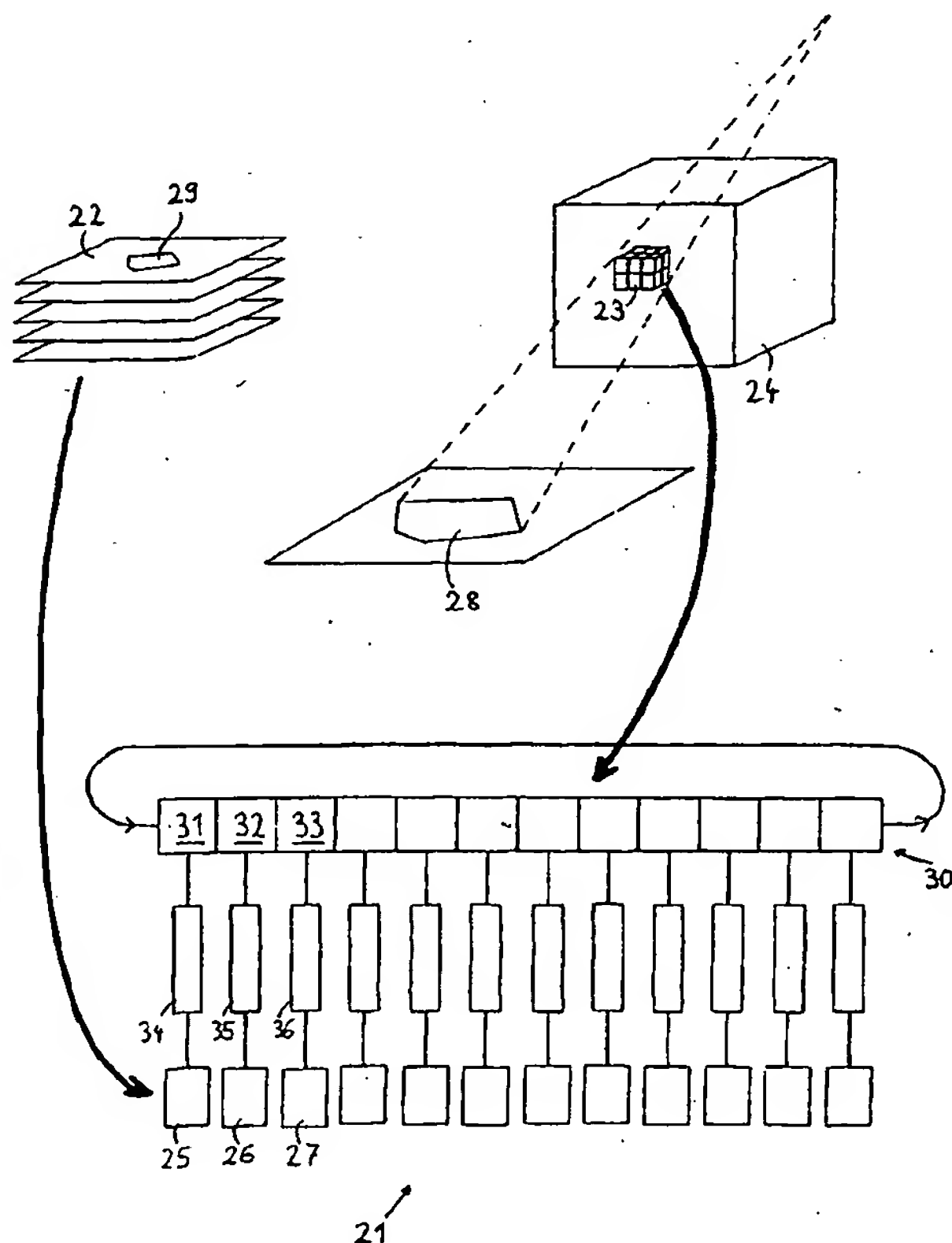
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(54) Title: 3D CONE BEAM RECONSTRUCTION



(57) Abstract: A backprojection unit is described that is adapted for back-projecting pixel data of  $n$  acquired projections onto a voxel subvolume, with  $n$  being a natural number. For each of the  $n$  projections, the backprojection unit comprises voxel center determination means adapted for projecting  $m$  contiguous voxels onto a respective one of the projections, with  $m \geq 2$  being a natural number, memory access means adapted for fetch-ing, for each of the  $m$  projected voxel centers, pixel data of pixels adjacent to the projected voxel center from a respective projection buffer, and multiplexing means adapted for distributing the fetched pixel data to  $m$  different pipelines. Furthermore, a method for backprojecting pixel data of  $n$  acquired projections onto a voxel subvolume is disclosed.

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